# IN THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF SOUTH CAROLINA SPARTANBURG DIVISION

FILED

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In Re: Fertilizer Group Litigation	C/A No. 7:01-1001-13 to 7:01-180PES CLERK C/A No. 7:01-3707-13 to 7:01-3742-13 C/A No. 7:02-1226-13 to 7:02-1232-13  NOTICE OF FILING
PLEASE TAKE NOTICE that IMO	C Global, Inc. and IMC Global Operations, Inc., by
counsel, file the attached synopses pursuan	at to the Court's letter dated August 7, 2002:
Baynes, Colin J.	
Duffield, Michael	
Hammer, Douglas	7
Kaltofen, Marco	
McFaddin, Michelle A.	
Roberts, John	

Spessard, John

Respectfully submitted:

IMC GLOBAL, INC. and IMC GLOBAL OPERATIONS, INC.

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## IMC's Synopsis of the Deposition of Dr. Colin Baynes

Colin Baynes is offered as an expert on air modeling to opine how various substances may have traveled through the air from the plant site into adjacent neighborhoods. He did not model dioxin nor any metals like cadmium or arsenic. Baynes' opinion regarding the location and amount of emissions into the neighborhoods is based solely upon estimates of emissions calculated by another plaintiff expert, John Roberts. Roberts uses no actual data, despite its availability, in calculating the emissions of the IMC plant. Instead, Roberts uses "emissions factors," which are estimates from EPA's industry averages. Roberts did not even use the correct EPA industry segment to obtain his emissions factors, and he further estimated the plant's total production. He also assumed and estimated the efficiencies of IMC's scrubbers. Roberts did not use the actual data available in lieu of using all of these questionable estimates.

Baynes did not review Roberts' emissions inventory for accuracy or reliability. Baynes models for a five-year period to determine average concentrations and dispersions of contaminants, but does not attempt to calculate what the actual emissions were between 1970 and 1986 or the differences from year to year in production or scrubber efficiencies.

Baynes acknowledges that air modeling had its genesis in the regulatory arena, and consequently the models err on the side of exaggerating emissions at each step in an overabundance of caution. In other words, air modeling is intentionally designed to overestimate the amount of emissions. Baynes agrees that the short-term calculations in his modeling can have up to a 50% error rate. He also agrees that inherent uncertainties in his input variables can result in additional variations of 50%. Moreover, Baynes acknowledges that slight errors in wind variation can result in modeling errors up to 70%. And despite his acknowledgement of modeling errors due to wind variation, Baynes uses meteorological data that was limited to certain years and that has no nighttime data.

Baynes testifies that no validation of his model is possible. Baynes' modeling analysis is simply a hypothetical mathematical prediction of possible emissions of fluoride, SO<sub>2</sub>, ammonia, and particulate from the IMC facility.

Baynes' testimony in other cases has been ruled inadmissible under *Daubert* principles or their state law counterparts on the grounds that he was relying on emissions data that was itself unreliable and inadmissible.

#### **Deposition Summary of Michael Duffield**

Michael Duffield has no formal education beyond junior high school (9th grade) in England's school system and some short, specialty college courses. His experience is largely in starting up large, complex Ammonia/Urea fertilizer plants, which is entirely different from IMC's granular mixed fertilizer plant. Most of this experience has been in Third-World or Eastern Block countries.

While Duffield is highly critical of IMC's operations with respect to employee health and safety and the control of its emissions, his own employment experience does not seem to reflect that concern. He says that the plant he ran in Algeria had no budget for environmental expenses, and no one to assist him in that regard. He testified that he had no dealings with the agency in charge of environmental enforcement and that he simply "estimated" emissions based on design specifications. He was not aware of any Algerian laws he had to comply with and simply tried to comply with U.S. laws as a "model." Despite his "attempt" to comply with U.S. laws, he did not use emission controls and isn't familiar with the requirements of the Clean Air Act. He further acknowledges that it was his practice not to monitor emissions. Duffield testified that it was not his responsibility to apply for permits in Third-World countries, that he did not conduct compliance inspections, never reported any violations, and never dealt with any hazardous wastes. He had no compliance program at all when operating in Yugoslavia, and the plant he managed in Turkey had environmental equipment only to "minimize" emissions.

Duffield testified that none of the plants he had ever managed had "wet scrubbers" for minimizing emissions, such as those that were designed and engineered for the Spartanburg facility. When asked about his experience with the phosphate granulation process (such as Spartanburg), he responded "none whatsoever." He did say that he had been in one to "walk through and look at what was happening, probably half an hour, an hour, sometimes two hours. Difficult to say. Long time ago."

Despite offering opinions about the definition of a "good neighbor," Duffield's testimony exhibits indifference to the local populations at plants he managed. He acknowledges that he did not know about applicable health and safety requirements for "local people" but for "us" he attempted to follow U.S. requirements. When he experienced "major safety issues" at the plant in Turkey, he "stopped my people" from going on the plant site, yet apparently he assumed no responsibility for the neighbors.

Duffield is critical of IMC for not being a "good neighbor" to the residents around its plant, suggesting that they should have monitored the air and conducted health screenings in those neighborhoods. He nevertheless testified that he never had air monitors installed in the neighborhoods surrounding any plant he operated and he never conducted health screenings on neighbors in the vicinity of any plant for which he has been responsible to determine if they were being exposed to any harmful substance.

Much of Duffield's testimony about employee health and safety is irrelevant because no plaintiff in the initial trial of 10 plaintiffs group was an IMC employee. He nevertheless testified that he had no opinion as to how the personal exposure monitoring conducted by IMC compared to the industry in general and did not know whether the people tested for exposure were wearing respirators. He acknowledged that he was not a "Certified Safety Professional" and that he was not familiar with the American Conference of Governmental Industrial Hygienists, a premiere source of standards in the field. He further testified that he was not familiar with industry standards of care for wearing respirators in a phosphate granulation plant and that he wasn't familiar with the standard of care in such plants for providing worker clothing.

# **IMC's Synopsis of Douglas Hammer Deposition**

Dr. Hammer is plaintiffs' sole medical expert. He purports to link each of the plaintiffs' complaints to exposures from the IMC plant. Attached is a chart of the medical complaints that Hammer causally connects to IMC for each plaintiff.

Hammer specializes in family practice and emergency medicine. He is not a toxicologist, and he did not attempt to estimate the dose of any chemical that the plaintiffs allegedly received. He also did not compare any exposures to any health-based criteria or standards promulgated by EPA, OSHA, or any other established organization. He offered his initial opinions on the first ten trial plaintiffs in a 2-page letter report on February 15, 2002. At that time, his methodology had consisted of (1) reviewing selected medical records of the plaintiffs and (2) meeting once with plaintiffs' counsel and another plaintiffs' expert. Before filing his next report on March 25, 2002, Hammer met the plaintiffs for 15 to 30 minutes to discuss their symptoms, exposures, and fears. He also reviewed their mini-depositions.

Hammer did not physically examine the plaintiffs. He did not take their vital signs or observe any of their physical complaints like rashes. Although many plaintiffs claim breathing problems, Hammer did not (1) listen to their breathing, (2) perform any pulmonary function testing, (3) review any chest x-rays, or (4) seek any allergy testing. He did not test any plaintiffs' blood or urine for the presence of chemicals. Hammer also did not review any diagnostic tests before concluding that IMC had caused plaintiffs' symptoms.

Hammer also concluded that IMC had caused the lung cancers of Leroy Martin and Willie Griffin. He based this conclusion on a single study claiming to have found a slightly increased risk of lung cancer from air pollution in urban areas. Both Griffin and Martin were heavy, lifetime smokers. Hammer acknowledged that smoking causes about 90% of all lung cancer deaths. He was unable to explain his opinion that dust and metals from IMC caused the lung cancers, rather than heavy smoking.

Hammer also testified that seven of the living plaintiffs reported generalized fears of contracting cancer and other illnesses. The other plaintiff, Tieraney Peeler, is only nine years old and too young to be fearful. Hammer acknowledged that none of the plaintiffs has a diagnosable medical condition from fear and that none of the plaintiffs requires counseling or medical attention for the reported fears. Moreover, he could not opine that any of the plaintiffs will more likely than not contract cancer or other serious disease in the future as a result of exposure from the IMC plant.

Plaintiffs' Medical Complaints Related To IMC By Dr. Hammer		
(In Trial Sequence Order)		

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	Trial Plaintiff	Present Medical Complaints	Past Medical Complaints
1.	Gary Walker	<ul> <li>current skin rashes</li> <li>current bilateral conjunctival injection (redness of eyes)</li> <li>possible increase of preexisting hypertension from fear</li> <li>fear of future illness</li> </ul>	<ul> <li>past eyes burning</li> <li>past skin burning</li> <li>past nose and throat burning</li> <li>past skin rashes</li> </ul>
2.	Tieraney Peeler (child)	• rash every 6 months (possible hives)	n/a
3.	Estate of Leroy Martin	n/a	Lung cancer (death)
4.	Clemon Rogers, Jr.	<ul><li>current sinus drainage</li><li>fear of future cancer</li></ul>	<ul><li>past cough/sneeze</li><li>past eye burning</li></ul>
5.	Scottie Werts	<ul><li>current sinus drainage</li><li>fear of future cancer or other disease</li></ul>	<ul><li>past eye irritation</li><li>past sinus drainage</li></ul>
6.	Vincent Ponds	<ul> <li>current night cough</li> <li>current sinus</li> <li>current chest congestion</li> <li>difficulty breathing winter and spring</li> <li>future fear of cancer and other disease</li> </ul>	<ul> <li>past burning eyes</li> <li>past sneezing</li> <li>past night cough</li> </ul>
7.	Stephan Keenon	<ul><li>current cough</li><li>current sinus</li><li>fear of cancer and other diseases</li></ul>	<ul><li>past skin irritation</li><li>past nose irritation</li><li>past eye irritation</li></ul>
8.	Estate of Willie Griffin	n/a	Lung cancer (death)
9.	Shuler Robinson, Jr.	<ul> <li>current breathing problems</li> <li>rashes</li> <li>fear of worse respiratory problems and cancer</li> </ul>	<ul> <li>past difficulty breathing</li> <li>past nose burning</li> <li>past headaches</li> <li>past itching</li> <li>past eye burning</li> </ul>
10.	Joe Peake	<ul><li>recurrent bronchitis</li><li>fear of future cancer and other disease</li></ul>	n/a

#### IMC's Synopsis of the Deposition of Marco Kaltofen

Kaltofen is a chemist who took soil and refrigerator dust samples from the plaintiffs' neighborhoods and the IMC property and compared the results. As an environmental activist working for Greenpeace, he plugged-up industry pipes placing industrial workers in jeopardy, obstructed roads with contaminated sludge, and disrupted shareholder meetings of companies he believed were polluting. For his endeavors, he has been arrested almost two dozen times. More than half of his income comes from litigation and three-quarters of that comes from the law firm representing the plaintiffs in this case.

Based on his comparison of EPA's on-site soil samples with his samples from the neighborhoods, he claims that IMC contaminated the neighborhoods with materials that came from the IMC facility by "airborne vector." He fails to follow any standard modeling methodology to support this opinion. He is neither a toxicologist nor a groundwater hydrogeologist, yet offers opinions in both fields.

His soil sample results do not support his opinion that substances found in neighborhood soil came from the plant. This is because he finds both higher and lower results as he moves away from IMC, rather than a pattern of decreasing amounts farther away from the plant. One reason is the existence of other plants and sources of these substances. Kaltofen admits that lead paint in the neighborhoods affect lead levels in his sampling. Although he acknowledges other sources besides IMC, he fails to consider or attempt to quantify the contribution of those sources.

Kaltofen's sample results are scientifically unreliable because he failed to follow governmentally approved, standard methodologies for collecting and analyzing samples. For instance, he kept many samples for 11 months in his "personal archives" before actually sending them to a laboratory for analysis, long after generally accepted scientific and government standards for retention times had lapsed. He trespassed on the IMC property when collecting his samples. Contrary to established soil sampling protocols, he did not prepare a written work plan or quality assurance plan. He acknowledges that he used individuals to take samples with no sampling experience. He did not use proper chain of custody procedures, and he sent samples to his laboratories without tamper-evident seals. He candidly admits that his laboratory had concerns with his procedures.

Kaltofen also took samples from vacuum cleaner bags, ceiling fans, and under refrigerators. He sampled without regard to whether the vacuum was used outside of the residence, the frequency the bag was emptied, and the age of refrigerators or ceiling fans from which he took dust samples. He acknowledges that metals are found in "background" in house dust, regardless of any industrial influence, but cannot quantify what levels of metals found in the dust are merely background. He claims that neighborhood sampling results are "above background," yet admits when pressed that his background levels are from Florida, not South Carolina.

Throughout his deposition, Kaltofen is evasive, claiming that he does not remember dates, details, or people. He recalls attending meetings with EPA officials, but cannot remember with whom he met. He recalls telephone calls with the Agency for Toxic Substances and Disease Registry ("ATSDR") regarding their concerns with the integrity of his samples and his sampling techniques, but cannot recall the substantive problems that agency had with his protocol or with whom he spoke. He arranged for a laboratory to analyze hair samples taken from certain plaintiffs, yet fails to mention the results in his expert report (no excessive levels were found).

Kaltofen testifies that dioxin was found on the IMC site and concludes that dioxin traveled from IMC into the neighborhoods. He concedes that, while on the IMC site without permission, he sampled the material he claims was the source of dioxin, yet has produced no dioxin results from those samples, was evasive about their absence, and could not say whether the samples confirmed his opinion. He admits that dioxin is ubiquitous in the environment and comes from a variety of commonplace sources, such as any kind of fire or automobile and truck exhaust.

#### **IMC's Synopsis of Michelle McFaddin Deposition**

McFaddin is plaintiffs' regulatory and legal expert. She is a Texas attorney whose practice includes expert witness services to lawyers. She has five years experience with two Texas agencies, the Texas Railroad Commission and the Texas Water Commission. She has never been associated with the South Carolina Department of Health and Environmental Control or EPA, particularly the EPA Region with regulatory authority over South Carolina and IMC's operations there. She testifies that her experience as a Texas regulator, and a lawyer who understands administrative law, qualifies her to offer expert opinions on complex environmental questions, including South Carolina law. She has, however, never before provided an expert opinion on questions of South Carolina law and has no familiarity with how South Carolina implemented relevant environmental laws like the Resource Conservation and Recovery Act ("RCRA") or South Carolina's own environmental laws. She has no expertise in the fertilizer industry. Her experience with RCRA did not even begin until after IMC shut down its Spartanburg facility. She relies upon the 1987 version of RCRA regulations, not those in effect when the plant was operating.

McFaddin was plaintiffs' counsel's agent to conduct document reviews, and she drafted for plaintiffs' complaints the portions about regulatory violations. She offers numerous opinions at deposition regarding how IMC violated the law and states that she intends to offer these opinions at trial. IMC was not cited by the state or federal government for any of the regulatory violations she hypothesizes about.

She also concedes that she was wrong to state in her report that the IMC site is a National Priorities List site. She likewise agrees that her conclusion that EPA considers the IMC site a threat to human health and the environment was misplaced. She testifies that she is not an expert in the Clean Air Act, the South Carolina Pollution Control Act, OSHA, IMC's manufacturing process, fate and transport, IMC's compliance with the Clean Water Act, fertilizer industry-wide compliance with environmental laws, or groundwater hydrology, yet she offers opinions in most of these areas.

Based on her review of documents and the unavailability of documents from a facility that closed its doors in 1986, she concludes that IMC violated the law. In reaching her conclusions, she ignores regulations or documents that do not support her conclusions. She testifies that IMC intentionally and materially misrepresented facts based on IMC's lack of documents to prove compliance. McFaddin has no basis for suggesting that the absence of documents proves intentional wrongdoing. Frequently in her deposition, rather than offer a methodological basis for her conclusions, she simply responds that she is a "former regulator" and that her former employment in Texas state agencies provides her with sufficient experience to make conclusions regarding what was happening at IMC.

She claims that IMC's closure activities violated RCRA. She testifies that hazardous waste went into IMC's ponds because storm water runoff must have contained K061. She cannot point to any evidence, however, that minor plant spillage of K061 actually went to IMC's ponds. She opines that IMC had an obligation to perform RCRA "corrective action" at the site, but cannot point to statutory or regulatory language that supports her conclusion. She testifies regarding the compliance status of three other plants and assumes that IMC Spartanburg must have violated environmental regulations similar to those three facilities, despite acknowledging the numerous differences between IMC and those facilities.

## IMC's Synopsis of Dr. John Roberts' Deposition

Plaintiffs have offered Roberts to estimate the substances and amounts emitted from the IMC facility. Plaintiffs' tout Roberts' experience while working for Philips Petroleum as an example of his "emissions inventory" experience. He testifies, however, that during his last years with Philips he was "a corporate spy" to determine what chemical ingredients that Philips' competitors were using in their processes. This is not what he does in this case. Roberts' experience is in preparing inventories for catastrophic one-time releases, like explosions and spills, and he has never prepared an emissions inventory for a continuously operating facility, like IMC. He has no experience in the fertilizer industry.

Roberts' opinion relies on "emissions factors" generated by EPA for certain sectors of the fertilizer industry in a document known as AP-42. The emissions factor is arrived at by averaging stack test data within EPA's possession from members of the industry. To arrive at an emissions inventory, AP-42 directs that the emissions factor should be multiplied by the annual production at a particular facility and, unless otherwise directed, that number should be multiplied by the percentage of scrubber efficiency. The result is an estimate of emissions escaping from the facility's stacks. EPA expressly makes certain assumptions about the type of industry, the reliability of the emissions factors, and the scrubber efficiencies when calculating an emissions factor.

Roberts acknowledges that the IMC facility produced single superphosphate and granular mixed fertilizer. While AP-42 has emissions factors for single superphosphate plants, Roberts did not use them. Without any scientific basis for doing so, he utilized emissions factors from a diammonium phosphate plant. Diammonium phosphate is a completely unrelated sector of the fertilizer industry, and utilizes a different process from that used at IMC. While Roberts relies solely on AP-42 to calculate the IMC facility's emissions, he admits that he did not consider the assumptions used by EPA when arriving at fertilizer-industry emissions factors. Nor did he review any source documents used by EPA to calculate emissions factors.

Roberts does not account for the scrubber efficiencies of the IMC facility in his calculations. While the tables in his report purport to reflect scrubber efficiencies, he has not determined whether those efficiencies were similar to IMC's and could not testify whether those percentages had been factored into his emissions inventory equations. Roberts admits that not knowing the appropriate scrubber efficiency for a particular unit could result in errors that are 10 times higher or lower than that which he predicts.

Roberts testifies that he believes EPA's AP-42 emissions factors are unreliable and must be discounted further to calculate accurately what was being emitted from IMC. He offers no scientific basis for discounting those factors or for the percentage of discount he selects. Instead, Roberts simply assigns percentages he believes are "appropriate."

Roberts testifies that where actual data is available, it should be used. He does not do this, however. Roberts utilizes hypothetical estimates of production rather than the actual production figures that were available to him. Roberts also fails to use actual emissions data while conceding that IMC had stack testing data from 1972, 1975, 1977, 1979, 1981, 1983, and 1985. Roberts dismisses the actual production and emissions data in favor of hypothetical estimates, which result in an exaggerated emissions inventory.

Roberts also conceded various errors in his calculations, yet corrected only some of those errors during the second day of his deposition. The other admitted errors remain to this day.

### Deposition Summary of John E. Spessard, Ph.D.

Dr. John Spessard is a chemist with a degree in finance. He testifies about his "investigation" of the IMC plant and speculates about its effect on surrounding neighborhoods.

Spessard believes that the K061 used by IMC is the source of dioxin contamination in the neighborhoods although he does not know that dioxin is "ubiquitous" (found everywhere). As to other sources in the neighborhoods, he hasn't attempted to fingerprint dioxin samples; he considered open burning of plastics is the only other possible source of dioxin; he did not consider burn barrels, thinking that "they had garbage service," although he acknowledges that burn barrels are a possible source. He admits that he is not familiar with residential furnaces as a source. In direct opposition to the scientific literature about dioxin, he contends that he would not expect dioxin from wood burning stoves and that he would not expect the formation of dioxin from internal combustion engines. In short, Spessard just believes that K061 is the source of dioxin contamination in the neighborhoods because he believes it:

- Q. And that's your opinion despite the fact that you haven't considered any other possible sources and you haven't considered the quantum of background levels which may be present in the area?
- A. That's my opinion, sir.

As to metals in the neighborhoods, Spessard did not consider or investigate other sources in the vicinity of the IMC facility. In addition to not considering other sources, he acknowledged that he could not quantify the amount that might have been washed out or transported by precipitation. He further conceded that he had not considered factors affecting the physical transport of the substances. He acknowledged that he does not know if the substances he attributes to IMC are found naturally in the soil in South Carolina and that he has not considered whether the relative concentrations of these substances are consistent with IMC as the source.

As to employees' exposure, Spessard has no evidence that IMC violated any OSHA standards. He admits that IMC actually measured workplace exposure to fluorides under the OSHA standard. Further, he has no data indicating that any standards were violated in surrounding neighborhoods, just anecdotal information and conjecture; no data to indicate sulfur dioxide exposure, just conjecture; and no opinion about the uninterrupted period of time residents may have smelled ammonia. He made no effort to quantify HFS escaping from storage tanks; made no effort to quantify the escape of HFS from the superphosphate storage pile; has not attempted to quantify evaporation from the two ponds; and has not attempted to quantify the frequency or cycle of addition of HFS to the ponds. Spessard acknowledged that he had not attempted to quantify exposure of either employees or people living in the neighboring areas to substances used at the plant.

As to groundwater, Spessard testified that he had no opinion whether groundwater might have migrated off the site because he knows nothing of groundwater hydrology at the site.

Finally, as to his theory that the lush vegetation around a monitoring well at the site is a result of contaminants being washed out by water pumped from the well, Spessard testified:

- Q. And in keeping with normal scientific methodology have you tested that hypothesis?
- A. Well it just looks so much prettier and so much greener than everything else I have seen in that plant site.
- O. That was the test?
- A. That was the test, yes sir.

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## **CERTIFICATE OF SERVICE**

I hereby certify that a true and exact copy of the foregoing Notice of Filing was sent via facsimile the 20<sup>th</sup> day of August, 2002, to the following as counsel for Plaintiffs:

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